**Supplementary material**

Table S1. Calculated binding free energies of inhibitors bound to protein tyrosine phosphatase YopH (PDB 1PA9), PTP1B (PDB 1AAX) and SptP (PDB 1G4U). aThe entropy contribution was neglected in the binding free energies calculations using the MM-PBSA method. bPromiscuity index (PI) was obtained by inspecting the assays in which the compound (or its analogue) was tested and in how many of those assays it was reported to be active in PubChem. cCID number was shown and the analogues of inhibitor is marked with a star.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| ID | Structure | ΔGa YopH | ΔGa PTP1B | ΔGa SptP | PIb | CIDc |
| 1 |  | -37.00 | -30.43 | -21.40 | NA | 6321691 |
| 2 |  | -24.95 | -19.47 | -6.21 | 2/551 | 1340697 |
| 3 |  | -27.21 | -20.88 | -18.23 | 0/3 | 5512408\* |
| 4 |  | -25.58 | -28.89 | -23.40 | 41/710 | 1905581 |
| 5 |  | -30.53 | -25.67 | -23.40 | 19/444 | 3107791\* |
| 6 |  | -20.64 | -21.24 | -20.40 | 0/8 | 2265535\* |
| 7 |  | -32.88 | -26.67 | -18.84 | 8/570 | 1101900\* |
| 8 |  | -34.07 | -28.21 | -20.87 | NA | 3789067 |
| 9 |  | -22.76 | -23.59 | -17.41 | 26/302 | 767530 |
| 10 |  | -32.83 | -27.41 | -22.65 | 0/2 | 13760501 |
| 11 |  | -29.31 | -33.65 | -14.74 | 0/7 | 1551749 |
| 12 |  | -30.06 | -28.15 | -25.84 | 1/1 | 6380590\* |
| 13 |  | -29.17 | -17.23 | **-**20.83 | 0/7 | 2852482\* |
| 14 |  | -29.65 | -23.79 | -18.40 | 0/2 | 6250830\* |
| 15 |  | -23.40 | -19.26 | -10.77 | 134/560 | 653297\* |
| 16 |  | -25.23 | -18.85 | -11.20 | 6/11 | 6097374\* |
| 17 |  | -26.66 | -22.52 | -19.59 | 0/1 | 1335290\* |
| 18 |  | -28.16 | -10.03 | -13.28 | 0/8 | 2199387\* |